

A Smart Home or Office in 2022

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Environment issues have captured the popular imagination. It is therefore imperative to direct Smart Home/Office design towards sustainable, environment-friendly practices. Resources and practices such as the Sun, sky, gravity, and maintenance-freedom offer themselves with renewed vigour to the discerning audience. We discuss here a smart home and/or office that is luxurious, environment-friendly, expansive, cosy, and rugged or maintenance free to a large extent.

A farmhouse is expansive. It may or may not be cosy, but it is expansive. However, acres and acres of a farmhouse means acres and acres of maintenance. By contrast, lightyears and lightyears of the sky have zero maintenance. A farmhouse is best suited to its original purpose, farming; its abuse in urban planning is an utter waste in our opinion.

Given that highlighting the sky in a smart home is desirable, we offer support in designing low-cost, safe, aesthetic, leak-proof, maintenance-free, large-scale Sun roofs for your space. The roof is now an important aspect of your house. It is imperative that solar power planning, solar shielding, water and plumbing planning all gel well to maximize your access to the sky. We will help you arrive at the best roof-top gardens and uses, as can be evidenced by the rooftop concert garden at our space (plot size: 500 square yards) depicted in the photographs here. Among other benefits, our garden has a cooling effect on our space, reducing air conditioning cost overall and turning the room temperature maintenance problem into a more solvable room heating problem as opposed to room cooling problem, as we discuss below. Access to the roof garden also has an elevator shaft for the frail and other riders, with a joystick based lift planned so that the riders can pause, go forward and back, and enjoy our artwork and paintings deployed in the shaft as they reach the garden. This is highly-doable technology, but is more conspicuous by its absence in real estate today (2020) than its presence.

Solar planning for your luxurious space should ensure 24-hour supply of hot and cold running water. All regular electricity bills of your space, including refrigerators should be solar supplied, so that your captive solar power is your sturdy power backup against grid failures among other benefits. Only room heating or cooling at night needs to be open to paid supply from the grid, as solar energy storage is an issue. You can employ a large battery bank for a large-scale solar plant, but then the repeating environmental and economic cost of battery replacement becomes an issue. Our recommendation is that you consume solar power to the maximum during the day itself, to save up for night time use. For example, if you employ a large insulated hot water tank, you can heat the water during the day itself to save up for its use at night. Similarly, all pumping of water to the overhead tank should be carried out in the day for free use at night and otherwise. Of course, the principle can be extended. If sufficient hot water is stored overhead in the day, then night heating of rooms can also be hot-water based, which is feasible technology today. Frankly, even room air conditioners ought to be runnable on hot or chilled water, but unfortunately, it does not seem like the air conditioning industry has thought through solar power as of date (2020), but hopefully will arrive at such solutions soon enough. In the meantime, it is better to have a cooler house to warm as opposed to a hotter house to cool, from a technology perspective. Regardless of the size of your solar power plant, we can help you partition your power consumption so that your electricity bills are minimized within a luxurious, solar-conscious lifestyle. Our own space supplies 4 partitions, which is more than the grid-supplied three phases, so as to minimize individual partition overload, among other benefits.

Minimality is an excellent design principle for minimizing maintenance. If a pressure pump can be eschewed, it is important to do so for low power consumption, as well as low maintenance and long life of plumbing. In our own space, we removed the pressure pump our space was originally

architected with and within the head of about a floor height, we have designed and installed high volume rain showers with no pressure pumping for either the hot water or the cold water. The overhead cold water tank is shielded by our solar panels to ensure coolness, further improving water quality. We can help you arrive at similar solar and gravity-based plumbing solutions for your space. Our plumbing recycles most of the shower and sink water through our rain water harvesting plant, so as to minimize our water footprint. It is not terribly hard to run water through a sediment filtered underground tank to arrive at sustainable low water-consumption houses with luxurious water-use quotient.

Buffnstaff's primary interest in smart home and office space is in its robotics support. We think today's dishwashers are brilliant, only that they require excessive work from their users. A dishwasher literally seeks a helping hand from its user in loading, part cleaning utensils, and unloading. We hope to supply the helping hand in the future, robotically. House cleaning is a painfully regular chore that is best automated. Such maintenance automation is high on our agenda for future work.